

the brain. In one of his most recent cases, where a girl had only worked for forty days in a lead factory, no lead was found in the brain on the most careful chemical analysis. It appeared to him that lead deranged the functions of the liver and kidney; their power as emunctories failed; the secretion of urine gradually lessened—sometimes even it ceased altogether; and the eclampsia—even whilst up to the commencement of the attack the urine was found to be free of albumen—could only be explained by the circulation of animal poisons that had been retained. Cerebral anæmia or hydræmia was invariably present after death, the surface of the brain appeared compressed, and the arteries contracted. These were circumstances which doubtless aided in bringing about a fatal termination.

To the use of preventive measures he had little to add, or to the treatment of saturnine paralysis by electricity. He had noticed that opiates, with castor oil, iodide of potassium, and sulphate of magnesia, gave satisfactory results in colic. Alum was not a successful remedy for colic in his cases. Lithia had increased the amount of urinary secretion, but had had no effect upon paralytic conditions. In the cases of acute lead encephalopathy nothing gave such satisfactory results as the inhalation of nitrite of amyl. Convulsions were frequently warded off by it. Pilocarpine had been successful where convulsions with complete suppression of urine had occurred.

INTESTINAL OBSTRUCTION CAUSED BY TUMOUR; ILEOSTOMY; DISAPPEARANCE OF TUMOUR; SUBSEQUENT ENTERORRAPHY; RECOVERY.

By J. GREIG SMITH, M.A., F.R.S.E.,

SURGEON TO THE BRISTOL ROYAL INFIRMARY; LECTURER ON SURGERY, BRISTOL MEDICAL SCHOOL.

THE following case is remarkable as an example of the spontaneous disappearance of a solid abdominal tumour of considerable size after abdominal section. A few such cases have been recorded, but they have been received either with open incredulity or great hesitation. It is necessary, therefore, in this instance to supply a full clinical account of the case which has been throughout under the observation and treatment of my colleagues and myself at the Bristol Royal Infirmary.

Lionel L—, aged twenty-five, shop assistant, was admitted to the Bristol Royal Infirmary on June 1st, 1889, complaining of pain in the abdomen, with frequent vomiting. Seven weeks previously the patient first felt pain in the hypogastric region; this gradually increased till, a month ago, he had to give up his work in London and go home to Wells. The day after his return home the pains became very severe, and in the evening he vomited a good deal of brown fluid. Dr. Fairbanks of Wells saw and prescribed for him, and he improved for a few hours. The pain and vomiting returned the next afternoon, but under treatment again abated, and he continued fairly well, though confined to bed for a week. At the commencement of the following week—that is, three weeks prior to admission—pain and vomiting recurred, and continued daily at intervals, chiefly in the afternoon and evening, up to the time of his admission. The bowels had been acting regularly but not satisfactorily. A fortnight previously he had on two occasions noticed that some whitish glairy fluid passed before the motion. Family history unimportant. The patient was a thin, pale man, with an anxious, pinched countenance. Pulse about 100; temperature 99° F. Abdomen distended to the utmost, measuring 31 in.; muscles very tense, almost brawny. Exaggerated resonance all over the abdomen, except over an area measuring 2 in. in diameter a little above the left anterior superior iliac spine. In this dull area a hard mass could be distinctly felt, but, on account of the abdominal distension and the muscular rigidity, could not be fully palpated. The tumour could just be felt by the finger in the rectum.

Progress of the case.—June 2nd: Temperature 98.5°.

Urine, sp. gr. 1032; neutral; no albumen; trace of sugar. No action of bowels since admission. A seidlitz powder was administered and an unsatisfactory action followed. Sickness and pain at 3 P.M., for which morphia was administered. Another severe attack of pain at 8 P.M., with vomiting, for which morphia was given. The vomited matter was light-brown in colour and odourless. Diet to consist of peptonised liquid foods.—3rd: Temperature 98.8°. Bowels acted once slightly after seidlitz powder. No sickness. Chloral draught at night.—4th: Temperature 98.2°. Urine, sp. gr. 1020; no albumen; trace of sugar. Pulse 76. Seidlitz powder followed by severe pain. Chloral draught was immediately vomited. Severe pain and vomiting at 7 P.M. The pain continuing, and getting worse, an injection hypodermically of $\frac{1}{4}$ gr. of morphia was administered at 8 P.M.; relief of pain, but no sleep.—5th: The abdominal distension is, if possible, more marked; violent peristalsis, with loud gurgling noises, the intestinal contractions being visible through the parietes. As the patient was evidently losing ground, and would soon be in a condition when operation would be impossible, it was decided after consultation of the surgical staff to operate, with the view of relieving the obstruction, which, although not absolute, was evidently becoming so.

At 1 P.M. on June 5th, the patient being under the influence of chloroform, the following operation was performed: An abdominal incision, beginning $1\frac{1}{2}$ in. below umbilicus, 2 in. long, was made; the parietal peritoneum was thickened and vascular, chiefly towards the left side. Occupying the left side of the abdomen and extending from the pelvis upwards towards the umbilicus was a hard, rounded tumour as large as a cocoa-nut, to which several coils of small intestine were firmly adherent. The growth was fixed below, and could not be moved from its position. The abdominal opening being dragged to the left the growth was exposed to view, and was seen to be covered with thickened peritoneum of a dusky hue, and with large vessels coursing over it. An aspirator needle inserted into its substance showed it to be solid; the puncture bled rather freely. A piece of distended ileum as close to the tumour as possible was pulled to the surface and fixed to the abdominal wound, with a view to subsequent opening. Fixation was made by two sutures passing through the parietes and outer coats of the bowel at the top and the bottom of the wound; and by two Halsted sutures passed through the outer coats of the bowel, and fixed to strapping at the sides of the wound. There was no suturing of parietal peritoneum to skin, and no sutures were placed in the incision beyond the two, which also passed through the outer coat of the bowel. Dressing of boracic lint and absorbent wool.—June 6th: Temperature normal; pulse 102. Vomited twice. Hot water rectal injection at 2.30 A.M. to relieve thirst; restless night.—7th: Temperature normal; pulse 76; no vomiting; a good night.—8th: Temperature 97.5°; pulse 69. Passed a good night. Intestine opened and a No. 8 celluloid catheter bent in hot water to a sigmoid curve was passed into its lumen. An indiarubber tube was attached to the outer end of the catheter and conveyed the intestinal contents into a bottle placed by his side. The intestine was firmly glued to the parietes, and there was no fouling of the wound by escaping fluids during the opening of the bowel. Bowels opened twice naturally after the intestine was opened.—9th: Temperature 98°; passed a fair night. Free escape of intestinal gases and fluids into the bottle.—10th: Temperature subnormal; pulse 74. Wound dressed, quite healthy and free from inflammation. A large piece of rubber tubing placed in the intestinal opening instead of the small catheter. Free discharge of brown faecal matter; abdomen nearly flat. Bowels acted naturally twice.—11th: Temperature subnormal. Not much discharge through the tube till the evening, when a pint of brown stercoraceous matter was rapidly ejected. This matter on being tested showed the presence of bile pigment. Bowels acted slightly after a simple enema.—12th: Temperature 97°. Patient improving in every way. Distension nearly gone.—13th: Temperature 97.5°. Continued improvement. Tube acting satisfactorily; discharge distinctly stercoraceous.—14th to 19th: Steady progress. About a pint of stercoraceous matter discharged daily through the tube into the bottle. No action of the bowels for five days till the 19th, when there was a slight action.—23rd: Free action of the bowels after soap enema continued daily till the 29th, when he was discharged with a small fistula,

through which a little yellow faecal matter escaped at intervals during the day. The bowels acted normally and regularly. All abdominal distension was gone, and there was no pain or nausea at any time. The tumour, now that all distension was gone, caused a quite visible bulging in the left lower abdomen, and was easily palpable. It had apparently increased in size, certainly it had not decreased.

From time to time the patient came to the infirmary for inspection, when we were surprised to find the growth gradually diminish in size, till in August, 1890, no trace of it could be felt. The patient himself had greatly improved in health, being then quite robust, well nourished, and, with the exception of the intestinal fistula, in perfect health. During this month he stayed in the infirmary for a week, when an attempt was made to close the fistula by Mitchell Banks' method, which failed.—Dec. 2nd: He returned with a view to having the fistula closed. Not more than a drachm of fluid came through it daily; but this had ceased to diminish in amount, and his work could not be satisfactorily performed while it existed. For a few days a diet was administered which left little residue, the bowels were kept acting freely, and enterorrhaphy was performed on the 8th. Chloroform anaesthesia; thorough scrubbing with soft soap all around fistula, and washing with 1-20 carbolic lotion. A small sponge with string attached passed into the fistula and pulled outwards, so as to keep it plugged. Abdominal incision an inch below fistula, and extending downwards for two inches more. Numerous adhesions between bowel and parietes carefully separated, working upwards towards fistula, where adhesions were so dense that they had to be divided by cutting. Incision carried an inch above fistula; bowel freed, brought through the wound, and closed above and below the fistula by Makin's clamps. Opening in intestine closed by Lembert's sutures arranged along axis of bowel. Parts well irrigated with warm boracic lotion. Bowel returned, and parietal wound closed with silkworm gut sutures.—10th: Progress entirely satisfactory, except that he complained of pain in the penis in passing urine and for a short time afterwards. Temperature 98°. Urine acid; sp. gr. 1033; no albumen; urates.—13th: Progress continues satisfactory, with normal pulse and temperature. Still pain on micturition. Urine smoky and acid; sp. gr. 1028; contains some albumen and blood. Wound dressed; stitches removed. Perfect union, except at seat of fistula, where a minute orifice exists, which is granulating.—16th: All pain on micturition now gone. Urine normal.—Jan. 3rd, 1891: Patient getting up and having ordinary diet.—13th: Patient discharged well; wound quite firm and dry.

Remarks.—What the nature of the tumour was I cannot say. It was perfectly solid, globular in shape, nearly as large as a child's head at birth, and had naked eye characters such as we associate with sarcoma. In the opinion of my colleagues who saw it and myself, it was malignant, and this opinion was conveyed to the relatives of the patient. The result proves that it was not malignant, however. It was certainly not faecal, and there were no evidences that it had an inflammatory origin, either simple or specific—indeed, all the signs were against this. Believing that the tumour was sarcomatous, and finding the bowels closely adherent to it, and therefore probably infected with the growth, I did not attempt removal. Ileostomy seemed to be most likely to relieve the patient of the great distension from which he suffered and from the recurring storms of intestinal contraction which caused so much pain. The operation performed in the manner described above was of the simplest character, and added little risk to the patient's condition. I am convinced that the elaborate methods of suturing usually recommended in this operation are quite unnecessary, even when the bowel is to be opened at once; and I have with perfect success still further simplified the mode of operation which I employed in this case eighteen months ago. The subsequent operation of enterorrhaphy was delayed until it seemed certain that the further maintenance of the fistula was unnecessary. Indeed, the fistula would probably have closed spontaneously at the end of three or four months had it been permitted to do so; at the end of a year the tissues around had become very hard and dense, and after failure of a simple method had been proved, enterorrhaphy was performed. It may be added that at this operation, with the fingers inside the abdomen, there was no trace of tumour to be felt.

Clifton

REMARKS UPON THE PROGNOSIS IN CROUPOUS PNEUMONIA.

BY DAVID DRUMMOND, M.A., M.D.,

PHYSICIAN TO THE ROYAL INFIRMARY, NEWCASTLE-ON-TYNE.

THE opinions advanced in this short paper are the outcome of a series of observations made in hospital and private practice over a considerable number of years. The prognosis of pneumonia is a subject of the deepest interest, and the fact that the disease is both short and acute—one in which the hopes and fears are crowded into a very few days, gives it a fascination that belongs to but few other medical topics. I am not concerned now with the statistical question of the mortality in pneumonia, but rather with the clinical grounds upon which a prognosis may be attempted. This much I may say, that in my opinion the rate of mortality in pneumonia is generally placed too low. Some statistics give a loss of but 8 per cent., others as low as 3½ per cent., whilst Hughes Bennett recorded 105 cases without a death. Of course it will be recognised that the mortality varies very much in different years and at different seasons, but my experience has led me to look upon pneumonia as one of the most fatal of acute diseases. At the outset I wish it to be understood that my remarks refer to what I may call fairly typical croupous pneumonia. I would rather not involve the subject by including complicated cases—as, for example, pneumonia arising in the course of Bright's disease, or after traumatism or surgical operations, or that complicated by ulcerative endocarditis. Nor do I propose to include that interesting group of cases in which empyema follows an attack of pneumonia.

It will, I think, be conceded that we all undertake the management of a case of uncomplicated pneumonia in the most hopeful spirit, and that our reply to questions raised by anxious friends, during the first few days, as to the risk is almost invariably reassuring, except in the case of the drunken, the aged, and the otherwise enfeebled. Yet few there are who have not had their minds rudely disabused, and their predictions falsified, by the appallingly sudden, because unexpected, termination to what promised to be a favourable case in a robust person. It would undoubtedly be a great gain if we could recognise indications of approaching danger some little time before the end is upon us, and thus diminish the number of so-called sudden and unexpected deaths in pneumonia, and so lessen the reproach that *prognosis* is one of the weakest phases of our art.

Naturally, the first point to be considered is the general condition of the patient—his ability to resist so serious an illness. Here, of course, the gross abuse of alcoholic stimulants plays a most important part, and for the special reason that in the great majority of fatal cases the result is due to cardiac failure, to which necessarily previous alcoholic excesses largely contribute. Then weak and elderly people are always insecure, though it must be admitted that, like the drunkard, the old and feeble will sometimes battle successfully with the storm in a manner that surprises the doctor and friends alike. These must therefore be prognosed with the utmost care, for assuredly no general rule founded on shattered constitution will apply. The same may be said of those liable to bronchitis, particularly if the subjects of emphysema to any extent, for although the risk is decidedly increased, few would think of condemning the patient on this ground alone. In this connexion it should be borne in mind that most of the expectoration in pneumonia is from the bronchial mucous membrane, which is stimulated to secrete in nearly every case, more or less, but particularly in cases of old-standing bronchorrhoea; and that this excessive secretion has a most damaging effect upon the portions of lung that are carrying on respiration. Further, old-standing cases of emphysema have associated with a general change in the vessels of the lung a condition of heart by no means favourable for withstanding an attack of pneumonia.

In venturing to offer an opinion as to the result in a case of pneumonia it is most important to determine the day of the disease, as symptoms of little or no prognostic moment at one time prove to be of the greatest value at another. It is not always an easy matter to say what day of disease the case has reached, for although the initial rigor will prove a useful guide in the majority of cases, it not unfre-